UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,218	03/16/2001	David Bongfeldt	9-15000-1US	5711

20988 7590 09/23/2004

OGILVY RENAULT
1981 MCGILL COLLEGE AVENUE
SUITE 1600
MONTREAL, QC H3A2Y3
CANADA

EXAMINER	
SOBUTKA, PHILIP	

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 09/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/809,218	BONGFELDT ET AL.	
	Examiner	Art Unit	
	Philip J. Sobutka	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18-31* is/are rejected.

7)☒ Claim(s) *32-35* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 March 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *0301,0602,0702*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 18-22,25,27 are rejected under 35 U.S.C. 102(e) as being anticipated by Weissman (US 2002/039885).

Consider claim 20. Weissman teaches a repeater adapted to transparently mediate RF signal traffic between a wireless communications device (Weissman fig 2, item 25) and a wireless communications network (Weissman fig 2, item 23) the repeater comprising: a first antenna unit adapted to maintain a network link with a transceiver of the wireless communications network (Weissman fig 2, item 22); and a second antenna unit coupled to the first antenna unit and adapted to maintain a local link with the wireless communications device within a local coverage area of the repeater (Weissman fig 2, item 36), the second antenna unit comprising an integral RF signal processor adapted to selectively amplify respective up link and downlink RF signals of the wireless communications device (Weissman see especially para. 150-153).

As to claim 21, Weissman teaches a repeater as claimed in claim 20, wherein the first antenna unit comprises: a first antenna adapted to receive downlink RF signals from the transceiver, and transmit uplink RF signals to the transceiver; and a first amplifier adapted to amplify the downlink RF signals received by the first antenna, and adjust a transmit power level of the uplink RF signals transmitted by the first antenna (Weissman see especially para 146-147).

As to claim 22, Weissman teaches a repeater as claimed in claim 21, wherein the first antenna is integrated with the first amplifier (Weissman, note that the first antenna and amplifier are integrated in the same master unit as shown in Weissman's figure 2).

As to claim 25, Weissman teaches a repeater as claimed in claim 20, wherein the second antenna unit further comprises a respective second antenna adapted to receive uplink RF signals and transmit downlink RF signals to and from the wireless device (Weissman see especially fig 2).

As to claim 27, note that Weissman's second antenna is integrated with the RF signal processor in the slave unit (Weissman fig 2).

As to claim 18,19, the device of Weissman would perform the claimed steps.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 23,26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman in view of Judd (US 6,731,904).

Consider claim 23. Weissman teaches everything claimed as shown above except for the first antenna being adapted to transmit and receive RF signals within a relatively narrow beam. Judd teaches that in repeaters for a cellular systems it is common to use a narrow beam antenna to link with the base station, since it only needs to link to the base and the narrow beam will allow for high gain (Judd see especially col 1, lines 15-25). It would have been obvious to one of ordinary skill in the art to modify Weissman to use the narrow beam antenna as taught by Judd in order to ensure that the base station link provide high gain.

As to claim 26, Weisman teaches everything claimed except the second antenna is adapted to transmit and receive RF signals within a relatively wide beam. Judd also teaches the repeater to mobile (the claimed second) antenna having the beam width necessary to cover the required area (Judd see especially col 1, lines 15-25). It would

have been obvious to one of ordinary skill in the art to modify Weissman as taught by Judd to use a wide beam antenna in order to cover the widest area possible.

6. Claims 24,28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissman in view of Leslie (US 4,941,200).

Consider claims 24,28. Weissman teaches everything claimed as shown above except for the first amplifier comprising: a power level detector adapted to detect a power level of the downlink RF signals received from the transceiver; and a variable amplifier adapted to adjust the transmit power level of the uplink RF signals in accordance with the detected power level of the downlink RF signals. Ito teaches a repeater with AGC, i.e. a power level detector used to adjust the power of the amplifier (Leslie see especially col 12, lines 10-35, 45-65). It would have been obvious to one of ordinary skill in the art to modify Weissman to use the AGC arrangement of Leslie in order to ensure that the signal received the necessary amplification.

As to claim 29, note that Weissman teaches the repeater in F1-F1 operation, wherein respective bandwidths of each of the uplink and downlink signal paths substantially correspond with those of the uplink and downlink channels of the wireless communications network (Weissman see especially para 17).

As to claims 30,31, note that the purpose of Weissman's detector is to acquire weak desired RF signals embedded within a larger broadband channel.

Allowable Subject Matter

7. Claims 32,33-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Consider claim 32. The nearest prior art as shown in Weissman fails to teach a repeater as claimed in claim 31, wherein a sample bandwidth of the sample is selected based on an anticipated signal-to-noise ratio within the selected path, and a desired rate of sampling across the entire bandwidth of the selected path.

Consider claim 33. The nearest prior art as shown in Weissman fails to teach the adaptive repeater of claim 28 wherein the controller comprises: a digital micro-controller adapted to generate a gain control signal in response to at least the detected R-F signals; and at least one respective gain control block disposed in each of the uplink and downlink paths, each gain control block being adapted to control a gain of the respective path in accordance with the gain control signal.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip J. Sobutka whose telephone number is 703-305-4825. The examiner can normally be reached on Monday-Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 703-308-7745. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Philip Sobutka
(703) 305-4825

September 16, 2004

NICK CORSARO
PRIMARY EXAMINER